To the knowledge of Macroheterocera of Southeast Asia and New Guinea. II. Hawk moths (Lepidoptera: Sphingidae) of Papua Province, Indonesia

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Abstract: A collection of the Hawk moths family Sphingidae containing 33 species of 15 genera from the Indonesian part of the island of New Guinea is listed and figured. Bibliography of this group is discussed. Synonymy is given.

Key words: Lepidoptera, Sphingidae, Indonesia, Papua Province, New Guinea.

Introduction

This publication is the second in a series[1] dedicated to Macroheterocera of Southeast Asia and New Guinea. It deals with a collection of Hawk moths (Lepidoptera: Sphingidae) taken during a two-month long expedition to New Guinea by the second author together with V.V. Sinyaev ("Eco-Design Studio, Moscow, Russia). The places and dates of collection are described in detail and illustrated in our first publication of this book (page 157, plate 5 figs 1-6).

It is obvious that the Hawk moths should be considered one of the best-studied groups of Macroheterocera in both the Oriental and Australian regions. There are many publications dealing with this interesting group. Unfortunately, most of them are descriptions of new species or subspecies and only a few of them concerns reviews or revisions of certain groups of species or genera. Some such works are cited in the bibliography in the end of this paper.

We should not forget about the existence of sites on the Internet, that introduce us to this interesting group of Lepidoptera. The more complete and professional of such sites should be noted. We consider the sites of Beck and Kitching (2008), Kitching and co-authors (Kitching et al. 2013) and Hogenes (2013) to be in this category. But you should always keep in mind that any Internet site is not a publication, and data from the site should be used very carefully. We used data from these sites to ascertain species distribution.

As in our previous publication (Gorbunov, Zamesov 2014), we have restricted the synonymy lists mainly to the taxa described from New Guinea and neighbouring archipelagos. In addition, we have excluded all homonyms and infrasubspecific names. All synonyms in the text are given in quotation marks because they have been checked in original publications.

The result of processing the collected material was the discovery of 34 species representing 15 genera which is 42.5% and 78.95% of Hawk moths fauna of the Indonesian Papua, respectively. All of them have been collected in new localities, thus providing new faunistic records. All taxa mentioned and illustrated herein are housed in the collection of the second author.

The order of all taxa in the list is given with accordance of our conception of the phylogenetic relationships within the family.

List of the Sphingidae (Lepidoptera) of Papua Province, Indonesia

Acherontia [Laspeyres], 1809

"... *Acherontia* ..." - [Laspeyres] 1809: 100. Type species: *Sphinx atropos* Linnaeus, 1758, by original designation.

1 – The first publication in the series concerns the Aganaidae (Lepidoptera: Noctuoidea) of Papua Province, Indonesia. It is published in the present volume on pp 157-165, pls 5-7.




= "*Brachyglossa*. Mihi." - Boisduval 1828: 33. Type species: *Sphinx atropos* Linnaeus, 1758, by monotypy.
= "*Atropos* Oken" - Agassiz 1846: 9. Type species: *Sphinx atropos* Linnaeus, 1758, by monotypy (Oken 1815).

Note: Superficially, this genus is distinguished very easily from other Hawk moths. It contains only three species. The list of the species of the genus was published by Eitschberger (2003a). All species are known as active migrants and therefore the presence of subspecies is highly questionable for the species of the genus. Only a single species occurs in New Guinea. It is represented in our material.
Distribution: The Afrotropical, Oriental and Australian regions.

***Acherontia lachesis* (Fabricius, 1798)** (Plate 8 figs 1-2)
"*Sphinx*. ... *Lachesis*." - Fabricius 1798: 434. Type locality: "... in India orientali ..." [= East India].
= "*Acherontia Satanas*, sp. n." - Boisduval 1836: 5, pl. 16, fig. 1. Type locality: "Indes orientales." [= East India].
= "*Sphinx* (*Acheronthia*) *lethe*, Westw." - Westwood 1848; 87, pl. 42, fig. 2. Type locality: "... various parts of the East Indies, Ceylon, & c." [= East India, Sri Lanka].
= "*Acherontia Sojejimae* Mats." - Matsumura 1908: 27, pl. 4, fig. 4. Type locality: "Locality-Kyushu (Saga)" [= Japan: Kyushu, Saga Prefecture].

Material examined: 1♂ (Plate 8 figs 1-2) Indonesia, Papua, Genyem env., 02˚38'S, 140˚10'E, 500 m, 25.I-02.II.2009.
Note: This species can easily be distinguished from the other Hawk moths of New Guinea by the figure of a "dead head" on the mesothorax dorsally and an interrupted medial light blue stripe on the abdomen. Presently it is divided into two subspecies, but we do not welcome the separation of populations of the Philippines as a separate subspecies *A. lachesis diehli* Eitschberger, 2003.
Distribution: This species is widespread nearly across the entire Austro-Oriental Region from Pakistan to the New Guinea Island. It is also known in eastern part of the Palaearctic Region.

***Agrius* Hübner, 1819 ["1816"]**
"*Agrius* ..." - Hübner 1819 ["1816"]: 140. Type species: *Sphinx cingulata* Fabricius, 1775, by subsequent designation by Tutt (1902: 355).
= "*Timoria*, gen. nov." - Kaye 1919: 93. Type species: *Timoria concolorata* Kaye, 1919, by original designation.

Note: This small genus consists of six species only. Some of them are known as active migrants. Two species are known in New Guinea. Both of them are present in our material from New Guinea.
Distribution: This genus is ubiquitous, occurring throughout the world.

***Agrius convolvuli* (Linnaeus, 1758)** (Plate 8 figs 3-6)
"*Sphinx*. *Convolvuli*." - Linnaeus 1758: 490. Type locality: not stated. [Europe?].
= "[*Sphinx*] *Patatas* ..." - Ménétriés 1857: 90. Type locality: "Taïti." [= French Polynesia, Tahiti Island].
= "*Sphinx Convolvuli* (var. *S. distans*)." - Butler 1874: 30, pl. 9, fig. 11. Type locality: "New Zealand ...".
= "*Protoparce orientalis*, n. sp." - Butler 1876: 609, pl. 41, figs 16, 17. Type locality: "North India ...; Scinde? ...; North Bengal ...; Moulmein ...; Ceylon ...; Hong-Kong ...; Java ...; Hakodadi ..." [= North and North East India; Sri Lanka; Hong Kong; Java; Japan: Hokkaido, Hakodate].
= "[*Agrius convolvuli*, Linné.] var. *javanensis*, n. var." - Tutt 1904: 333. Type locality: not stated [= Indonesia: Java?].
= "[*Agrius convolvuli*, Linné.] var. *ichangensis*, n. var." - Tutt 1904: 333. Type locality: "... from Ichang, ..." [= China: Hubei Province, Yichang].
= "[*Agrius convolvuli*, Linné.] var. *tahitiensis*, n. var." - Tutt 1904: 333. Type locality: "The Tahitian race ..." [= French Polynesia: Tahiti Island].
= "*Protoparce convolvuli* var. *indica* ..." - Skell 1913: 56. Type locality: "Petoemboekan, Sumatras Ostküste, ..." [= Indonesia: Sumatra, Petoemboekan].
= "*Herse convolvuli marschallensis* subsp.nov." - Clark 1922: 3. Type locality: "Taluit, Marschall Islands." [=Marschall Islands: Jaluit Atoll].

Material examined: 1♂ Indonesia, Papua, Genyem env., 02˚38'S, 140˚10'E, 500 m, 30.XII.2008-02.I.2009; 1♀ (Plate 8 figs 5-6), same locality and date; 1♂ (Plate 8 figs 3-4), Indonesia, Papua, Taritatu riv., SE from Dabra, 03˚15'S, 138˚34'E, 60 m, 05-16.I.2009.
Note: It can be easy distinguished from the New Guinean congener by the pink pattern on the abdomen. This species has a very high migratory ability.
Distribution: It is distributed throughout the Old World. Nearly everywhere, it is very common.

***Agrius luctifera* (Walker, 1864)** (Plate 8 figs 7-8)
"*Macrosila luctifera*." - Walker 1864: 35. Type locality: "New Guinea, Mysol, Ceram." [= Indonesia: Maluku Islands, Seram Island; New Guinea Island].
= "*Protoparce Schmeltzii*, sp. n." - Butler 1882: 158. Type locality: "Australian region." [= Australia?].
= "*Phlegethontius lixi* sp. nov." - Rothschild 1894: 94. Type locality: "Nicura, British New Guinea ..." [= Papua New Guinea].
= "*P.*[*rotoparce*] *triangulifera*, sp. nov." — Holland 1900: 556. Type locality: "[Buru]" [= Indonesia: Maluku Islands, Buru Island].
= "*Timoria concolorata*, sp. n." - Kaye 1919: 93. Type locality: "Tenimber Island ..." [= Indonesia: Maluku Islands, Tanimbar Islands].
= "*Herse luctifera elegans*, subsp. nova." - Gehlen 1932: 65, Fig. 2. Type Locality: "Halmaheira." [= Indonesia: Maluku Islands, Halmahera Island].

Material examined: 1♀ (Plate 8 figs 7-8), Indonesia, Papua, Sentani env., Cyclops Mts., 02°32'S, 140°28'E, 300 m, 26-29.XII.2008.
Note: This species differs from the previous one because of the presence of a white discal spot on the forewing and absence of pink scales on the abdomen.
Distribution: Restricted to Wallacea, New Guinea and the islands off to the NE and E of the latter.

***Megacorma* Rothschild, Jordan, 1903**
"*Megacorma* gen. nov." - Rothschild, Jordan 1903: 6 (key), 15. Type species: *Macrosila obliqua* Walker, 1856, by original designation.

Note: A small genus consisting of 4-5 species. However, due to the fact that several slightly different species were described inside the area of the widespread type species (Eitschberger 1999, 2003b, 2007), we believe that this genus is in need of a thorough revision. Superficially, species of the genus are large and robust with a very long proboscis and with a yellowish-grey forewing with a dark grey and black pattern. They somewhat resemble the species of the genera *Meganoton* Boisduval, 1875 ["1874"] and *Psilogramma* Rothschild, Jordan, 1903. A single species is known in New Guinea.
Distribution: The Oriental and Australian regions from India in the northwest to northeastern Australia and Solomon Islands in the south and southeast.

***Megacorma obliqua* (Walker, 1856)** (Plate 8 figs 9-10)
"*Macrosila obliqua*." - Walker 1856: 208. Type locality: "Ceylon." [= Sri Lanka].
= "S.[*phinx*] *Nestor*. Boisd." - Boisduval 1875 ["1874"] [2]: 113. Type locality: "... de l'Himalaya." [= Himalaya Mts.].
= "*Megacorma obliqua remota* subsp. nov." - Jordan 1924: 298. Type locality: "Arawa, Bouganville, ..." [= Papua New Guinea: Autonomus Region of Bougainville, Arawa Island].

Material examined: 1♂ Indonesia, Papua, Taritatu riv., SE from Dabra, 03°15'S, 138°34'E, 60 m, 05-16.I.2009; 3♂ Indonesia, Papua, Genyem env., 02°38'S, 140°10'E, 500 m, 25.I-02.II.2009; 1♂ (Plate 8 figs 9-10) same locality and date.
Note: A large and superficially easy to recognize species, which cannot be confused with any Hawk moth species of New Guinea. Usually it does not divided into subspecies.
Distribution: The Oriental and Australian regions from India in the northwest to northeastern Australia and Solomon Islands in the south and southeast.

***Meganoton* Boisduval, 1875 ["1874"]**
"*Meganoton*. Boisd." - Boisduval 1875 ["1874"]: 58. Type species: *Macrosila nyctiphanes* Walker, 1856, by subsequent designation by Kirby (1892: 682).

Note: A small genus consisting of five or six species. Superficially, the species of the genus are somewhat similar to those of *Megacorma* Rothschild, Jordan, 1903 and *Psilogramma* Rothschild, Jordan, 1903. Only two species are known to occur in New Guinea. We have on hand only a pair of a single species from New Guinea.
Range: The genus occurs in the eastern Palaearctic, in the Oriental and the northern part of the Australian regions.

***Meganoton rubescens* (Butler, 1875)** (Plate 8 figs 11-14)
"*Diludia rubescens*." - Butler 1875c [3]: 623. This is the new name for *Diludia rufescens* Butler, 1875b[4]: 260 [nec *Diludia rufescens* Butler, 1875a [5]: 12)].

2 – Butler (1876: 513) wrote: "Dr. Boisduval's long expected work on the Sphingidae has recently appeared, bearing date 1874; that it was not, however, procurable earlier than February 22nd, 1875, I have evidence in a letter from the author, dated 18th of February, 1875, ...".
3 – This paper was published in "Proceedings ..." 16th of November 1875, what is shown in the top of pages.
4 – This paper was published in "Proceedings ..." 16th of March 1875, what is shown in the top of pages.
5 – This paper was published in "Proceedings ..." 5th of January 1875, what is shown in the top of pages.




Type locality: "North India".
= "*M.*[*acrosila*] *Severina*, n. sp." - Miskin 1891: 25. Type locality: "... Cape York." [= Australia: Queensland, Cape York Peninsula].
= "*Meganoton thielei* nov. spec." - Huwe 1906: 316, Taf. 6, Fig. 1. Type locality: "... Sumatra ..." [= Indonesia: Sumatra].
= "*Meganoton rufescens* [sic!] *joachimi* subsp. nov." - Clarck 1926: 45. Type locality: "Ceram." [= Indonesia: Seram Island].
= "*Maganoton rufescens* [sic!] *titan*, subsp. nova." - Gehlen 1933: 78. Type locality: "Von Halmaheira" [= Indonesia: Maluku, Halmahera Island].
= "*Meganoton rufescens* [sic!] *amboinicus* subsp. nov." - Clark 1938: 38. Type locality: "... on Amboina, Moluccas." [= Indonesia: Maluku, Ambon Island].

Material examined: 1♂ (Plate 8 figs 11-12) Indonesia, Papua, Taritatu riv., SE from Dabra, 03˚15'S, 138˚34'E, 60 m, 05-16.I.2009; 1♀ (Plate 8 figs 13-14) Indonesia, Papua, Genyem env., 02˚38'S, 140˚10'E, 500 m, 30.XII.2008-02.I.2009.
Note: The species is somewhat variable in wing colour patterns as well as background coloration. Presently it is divided into six subspecies, of which subspecies *severina* Miskin, 1891 inhabits New Guinea and northeastern Australia.
Distribution: It is widespread from north India and south China in the northwest and north to north and northeastern Australia and Solomon Islands in the south and southeast.

***Psilogramma* Rothschild, Jordan, 1903**
"*Psilogramma* gen. nov." - Rothschild, Jordan 1903: 29 (key), 42. Type species: *Sphinx menephron* Cramer, 1780, by original designation.

Note: Superficially the extremely variable species of the genus resembles those of the genera *Meganoton* Boisduval, 1875 ["1874"], *Megacorma* Rothschild, Jordan, 1903, and somewhat *Agrius* Hübner, 1819 ["1816"]. Until the beginning of this century, this genus included only four species (Holloway 1987; Meng 1990). Thanks to the diligence of some researchers (Brechlin 2001; Eitschberger 2001; 2010a) during the first decade the number of species in the genus has been brought up to more than 60 (Eitschberger 2010b). We completely agree with the opinion of Zolotuhin and Ryabov that "the system and score of the genus became very complicate after the last works ..." (Zolotuhin, Ryabov 2012: 37). Besides that we have to add that now this genus is in need of revision using not only morphological but also molecular data. At present three species are known to occur in New Guinea. All of them are present in our collection.
Distribution: This genus inhabits the southern and eastern parts of Palaearctic, Oriental and Australian regions.

***Psilogramma mastrigti* Eitschberger, 2001** (Plate 9 figs 1-6)
"*Psilogramma mastrigti* spec. nov." - Eitschberger 2001a (14th of May): 7, Abb. 15; Taf. 22, Abb. 1-6; Taf. 23, Abb. 1-4. Type locality: "Indonesia, Irian Jaya, Kabupaten Jayapura, Kecamatan Lehre, Rifi Taja, 2000 m, ..." [= Indonesia: Papua Province, Jayapura area].
= "*Psilogramma papuensis* Brechlin n. sp." - Brechlin 2001 ([31th] of May): 16, Abb. 19, 20, 42, 43, 84, 85. Type locality: "Papua New Guinea, Western Highlands - province, Kubang near Kol, 1800 m, ..." [= Papua New Guinea: West Highlands Province, environs of Mount Hagen].
= "*Psilogramma mastrigti aruensis* subsp. nov" - Eitschberger 2004: 5, Farbtaf. 2, Abb. 4, 5; Farbtaf. 3, Abb. 1, 2. Type locality: "Indonesia, Aru Archipelago, 7 m, Island of Wokam, Province Maluku, Kabupatan Maluku, ..." [= Indonesia: Maluku Islands, Aru Islands, Tanahbesar Island].

Material examined: 1♂ (Plate 9 figs 3-4) Indonesia, Papua, Genyem env., 02˚38'S, 140˚10'E, 500 m, 30.XII.2008-02.I.2009; 4♂, 2♀, same locality and date; 5♂, same locality, 27-30.I.2009; 10♂, 1♀ (Plate 9 figs 5-6), same locality, 25.I-02.II.2009; 3♂ Indonesia, Papua, Taritatu riv., SE from Dabra, 03˚15'S, 138˚34'E, 60 m, 05-16.I.2009; 1♂ (Plate 9 figs 1-2), same locality and date; 1♂ Indonesia, Papua, Sentani env., Cyclops Mts., 02°32'S, 140°28'E, 300 m, 04-06.II.2009.
Note: The status of this species, as well as all newly described ones are in need a careful revision. At present this species is divided into two subspecies, of which the nominotypical one occurs in New Guinea.
Distribution: Restricted to the eastern Maluku, New Guinea and north and eastern Australia.

***Psilogramma wernerwolfi* Eitschberger, 2001** (Plate 9 figs 7-10)
"*Psilogramma wernerwolfi* spec. nov." - Eitschberger 2001a (14th of May): 8, Abb. 17, Taf. 27, Abb. 1-6, Taf. 28, Abb. 1-4. Type locality: "Indonesia, Irian Jaya, Sentani, 60 m, ..." [= Indonesia: Papua Province, Sentani].
= "*Psilogramma kitchingi* Brechlin & Lachlan "n.




sp." - Brechlin, Lachlan in Brechlin 2001 ([31th] of May): 18, Abb. 18, 27, 44, 66, 67. Type locality: "Indonesia, Irian Jaya, Nabire, 25 km S Manokwari, Arfak Mts., Ngat Biep, river Ngat valley, 250 m. ..." [= Indonesia: West Papua, environs of Manokwari].

Material examined: 2♂, 1♀ Indonesia, Papua, Genyem env., 02˚38'S, 140˚10'E, 500 m, 30.XII.2008-02.I.2009; 1♂ (Plate 9 figs 7-8), 1♀ (Plate 9 figs 9-10), same locality, 25.I-02.II.2009; 1♂, same locality and date.
Note: Superficially, this species is somewhat lighter in coloration and smaller than previous one.
Distribution: The species seems to be endemic to New Guinea.

***Psilogramma anne* Eitschberger, 2001** (Plate 9 figs 11-18)
"*Psilogramma anne* spec. nov." - Eitschberger 2001a: 10, Abb. 25; Taf. 41, Abb. 1-4; Taf. 42, Abb. 1, 2. Type locality: "Indonesia, Irian Jaya, Sentani, 60 m, ..." [= Indonesia: Papua Province, Sentani].

Material examined: 1♂ (Plate 9 figs 13-14), 1♀ (Plate 9 figs 17-18) Indonesia, Papua, Genyem env., 02˚38'S, 140˚10'E, 500 m, 30.XII.2008-02.I.2009; 9♂, same locality and date; 2♂, 1♀ (Plate 9 figs 15-16), same locality, 25.I-02.II.2009; 1♂, same locality, 27-30.I.2009; 1♂ (Plate 9 figs 11-12) Indonesia, Papua, Taritatu riv., SE from Dabra, 03˚15'S, 138˚34'E, 60 m, 05-16.I.2009; 5 ♂, same locality and date.
Note: This is the darkest species of the genus in the fauna of New Guinea.
Distribution: As the previous one, it is known to occur in New Guinea only.

***Ambulyx* Westwood, 1848**
"*Sphinx* (*Ambulyx*) ..." - Westwood 1848 [6]: [61]. Type species: *Sphinx* (*Ambulyx*) *substrigilis* Westwood, 1848, by monotypy.
= "*Oxyambulyx* gen. nov." - Rothschild, Jordan 1903: 173 (key), 192. Type species: *Sphinx substrigilis* Westwood, 1848, by original designation.
Note: This is a large genus which contains up to 60 described species with a lot of subspecies. This genus cannot by confused with any other Hawk moths of New Guinea because of the shape and colour pattern of the forewing. At present, four species only have been collected in New Guinea. We have on hand only three species from the island.
Distribution: This genus is distributed in the eastern part of the Palaearctic, Oriental and Australian regions from Pakistan and North India in the west to The Solomon Islands in the east, from Korea and Japan in the north and northern Australia in the south.

***Ambulyx wildei* Miskin, 1891** (Plate 10 figs 1-6)
"*A.*[*mbulyx*] *Wildei*, n. sp." - Miskin 1891: 20. Type locality: "Cairns." [= Australia: Queensland, Cairns].

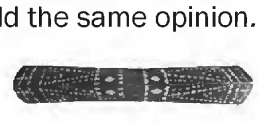
Material examined: 1♂ Indonesia, Papua, Genyem env., 02˚38'S, 140˚10'E, 500 m, 30.XII.2008-02.I.2009; 1♂, same locality, 25.I.2009; 1♂ (Plate 10 figs 1-2), same locality, 25.I-02.II.2009; 1♂ (Plate 10 figs 3-4), 1♂ (Plate 10 figs 5-6) Indonesia, Papua, Taritatu riv., SE from Dabra, 03˚15'S, 138˚34'E, 60 m, 05-16.I.2009; 2♂, same locality and date.
Note: This species is somewhat similar to *A. phalaris* Jordan, 1919 and *A. dohertyi* Rothschild, 1894, but can be distinguished from them by the more contrast coloration of the wings.
Distribution: It inhabits New Guinea and coastal areas of Queensland in Australia.

***Ambulyx phalaris* (Jordan, 1919)** (Plate 10 figs 7-8)
"*Oxyambulyx phalaris* Jord." - Jordan 1919: 190. Type locality: "Dutch and British New Guinea, ..." [= Papua New Guinea].
= "*O.*[*xyambulyx*] *phalaris carycina* subsp. nov." - Jordan 1919: 191, Type locality: "Rook Island, ..." [= Papua New Guinea: Umboi Island].

Material examined: 1♀ (Plate 10 figs 7-8) Indonesia, Papua, Genyem env., 02˚38'S, 140˚10'E, 500 m, 25.I-02.II.2009.
Note: It is a rather rare species in collections. Presently it is known from a few localities.
Distribution: This species inhabits the island of Seram in the eastern Maluku and the island of New Guinea.

***Ambulyx dohertyi* Rothschild, 1894** (Plate 10 figs 9-12)
"*Ambulyx dohertyi* sp. nov." - Rothschild 1894: 87. Type locality: "Humboldt Bay, N. New Guinea ..." [= Indonesia: Papua Province, Yos Sudorso Bay].
= "*Oxyambulyx dohertyi salomonis* subsp. nov."

6 – We cannot agree with the opinion of Fletcher and Nye (1982) and some other lepidopterists (Brechlin 2009a, 2009b; Zolotuhin, Ryabov 2012) that the date of publication of this taxon should be "1847", which is indicated for the colour plate with the picture of the type species, since this plate does not have any name. The name "*Ambulyx*" is given in the text, for which the date "1848" is shown on the title-page of the work. Sherborne (1922) held the same opinion.




- Rothschild, Jordan 1903: 209. Type locality: "Guadalcanar [sic!], Solomon Is., ..." [= Solomon Islands: Guadalcanal Island].
= "*Oxyambulyx dohertyi queenslandi* subsp. nov." - Clark 1928: 40. Type locality: "Kuranda, Queensland, Australia." [= Australia: Queensland.].
= "*Ambulyx dohertyi novoirlandensis* n. ssp." - Brechlin, Kitching 2010: 21. Type locality: "PNG, New Ireland prov.; Lelet plateau, 5 km SE Kamiraba; ..." [= Papua New Guinea: New Ireland Province, New Ireland Island].
= "*Ambulyx dohertyi novobritannica* n. ssp." - Brechlin, Kitching 2010: 22. Type locality: "PNG/ West New Britain prov.; Bereme, 57 km SE Kimbe, ..." [= Papua New Guinea: West Britain Province, New Britain Island].

Material examined: 1♂ (Plate 10 figs 9-10) Indonesia, Papua, Genyem env., 02˚38'S, 140˚10'E, 500 m, 30.XII.2008-02.I.2009; 1♂ (Plate 10 figs 11-12), same locality, 25.I-02.II.2009; 2♂, same locality and date; 4♂ Indonesia, Papua, Taritatu riv., SE from Dabra, 03˚15'S, 138˚34'E, 60 m, 05-16.I.2009.
Note: One of the most variable species of the genus in the region. At present, it is divided into five subspecies, which, in our opinion, is completely unjustified.
Distribution: It occurs in New Guinea and surrounding islands ranging from Raja Ampat Islands in the west to Solomon Islands in the east. It is know in northern Australia as well.

***Gnathothlibus* Wallengren, 1858**
"*Gnathothlibus*. Mihi." - Wallengren 1858: 137. Type species: *Gnathothlibus erotoides* Wallengren, 1858 [= *Sphinx eras* Boisduval, 1832], by original designation.
= "*Chromis* ..." - Hübner 1819 ["1816"]: 138 [nec *Chromis* Lacepède, 1802 (Pisces)]. Type species: *Sphinx erotus* Cramer, 1777, by monotypy.

Note: The species of the genus can be easy separated from other genera of the region by the colour pattern of the forewing and bright yellow or orange coloration of the hindwing. Currently, there is no consensus on the species structure of the genus. Its composition includes from 7 (Zolotuhin, Ryabov 2012) to 12 (Beck, Kitching 2008; Kitching et al. 2013) species.
Distribution: This genus is distributed in the Oriental and Australian regions from Sri Lanka in the west to East Polynesia in the east and southeast Australia in the south.

***Gnathothlibus eras* (Boisduval, 1832)** (Plate 10 figs 13-16)
"*D.*[*eilephila*] *eras*, Boisd." - Boisduval 1832: 185. Type locality: "... à Taïti." [= French Polynesia: Tahiti Island].
= "*Gnathothlibus erotoides* n. sp." - Wallengrén 1860: 43. Type locality: "Ad Sidney Novae Hollandiae ..." [= Australia].
= "*Chaerocampa* [sic!] ... *Sapor*" - Koch 1871: 239. Type locality: "dem Australischen ..." [= Australia].
= "*Chaerocampa* [sic!] ... *Eroides*" - Koch 1871: 240. Type locality: "vom Australischen ..." [= Australia].

Material examined: 1♂ (Plate 10 figs 13-14) Indonesia, Papua, Genyem env., 02˚38'S, 140˚10'E, 500 m, 30.XII.2008-02.I.2009; 1♂ (Plate 10 figs 15-16) Indonesia, Papua, Taritatu riv., SE from Dabra, 03˚15'S, 138˚34'E, 60 m, 05-16.I.2009.
Note: Some authors (Hogenes 2013) consider this taxon to be a subspecies of *G. erotus* (Cramer, 1777). In our opinion the population east of Sumatra and Borneo should be considered as a separate species.
Distribution: The species occurs the Philippines, Celebes and Java in the west to eastern Polynesia in the east and Southeast Australia in the South.

***Gnathothlibus heliodes* (Meyrick, 1889)** (Plate 10 figs 17-20)
"*Deilephila heliodes*, n. s." - Meyrick 1889: 455. Type locality: "... from New Guinea." [= New Guinea].
= "*Theretra alberti* sp. nov." - Rothschild 1895: 162, pl. 9, fig. 9. Type locality: "Fergusson Island, D'Entrecasteaux Islands ..." [= Papua New Guinea: Milne Bay Province, Fergusson Island].

Material examined: 1♂ (Plate 10 figs 17-18), 1♂ (Plate 10 figs 19-20) Indonesia, Papua, Taritatu riv., SE from Dabra, 03˚15'S, 138˚34'E, 60 m, 05-16.I.2009; 1♂, 1♀, same locality and date.
Note: This species is somewhat similar to an endemic *G. meeki* (Rothschild, Jordan, 1907), but it can be distinguished by the colour pattern of the hindwing.
Distribution: Restricted to New Guinea and some islands off to the northwest (Waigeo Island) and east (Fergusson Island).

***Daphnis* Hübner 1819 ["1816"]**
"*Daphnis* ..." Hübner 1819 ["1816"]: 134. Type species: *Sphinx nerii* Linnaeus, 1758, by subsequent designation by Curtis (1837: 626).
= "*Histriosphinx* Varis, gen. n." - Varis 1976: 127.




Type species: *Sphinx nerii* Linnaeus, 1758, by original designation.

Note: The species of the genus are large and robust. The ground colours of the wings are green, brown, dark green or dark olive with a characteristic wing pattern. At present the genus contains 12 species (Eitschberger, Melichar 2010; Haxaire, Melichar 2011). There are four species in New Guinea, of which we have three species in our collection.
Distribution: Afrotropical, Oriental and Australian regions. The type species of the genus is known as a vagrant to the eastern Palaearctic.

***Daphnis moorei* (W.J. MacLeay, 1866)** (Plate 11 figs 1-2)
"*Darapsa Moorei* nov. sp." - W.J. Macleay 1866: lv. Type locality: "[Cape York]" [= Australia: Queensland, Cape York Peninsula].
= "*Daphnis pallescens*, n. sp." - Butler 1875a: 6. Type locality: "Queensland." [= Australia: Queensland].
= "*Daphnis magnifica*, n. sp." - Butler 1877a: 461. Type locality: "Rockhampton, Queensland." [= Australia: Queensland, Rockhampton].
= "*Deilephila gigantea* spec. nov." - Röber 1921: 11. Type locality: "Südwest-Neuguinea; ..." [= Indonesia: West Papua].
Daphnis hypothous auctorum, nec *Daphnis hypothous* (Cramer, 1780) (Plate 11 figs 3-4).

Material examined: 1♂ (Plate 11 figs 1-2) Indonesia, Papua, Sentani env., Cyclops Mts., 02°32'S, 140°28'E, 300 m, 26-29.XII.2008; 3♂ Indonesia, Papua, Genyem env., 02°38'S, 140°10'E, 500 m, 30.XII.2008-02.I.2009; 5♂, same locality, 25.I-02.II.2009; 2♂, same locality, 27-30.I.2009; 5♂ Indonesia, Papua, Taritatu riv., SE from Dabra, 03°15'S, 138°34'E, 60 m, 05-16.I.2009.
Note: This taxon was raised from a subspecies of *D. hypothous* (Cramer, 1780) (Plate 11 figs 1-2) to specific level by Eitschberger and Melichar (2010). Currently, it is not divided into subspecies. A rather common species.
Distribution: It occurs in New Guinea and surrounding islands off to the east up to Vanuatu, known from Queensland, Australia as well (Eitschberger, Melichar 2010).

***Daphnis dohertyi* Rothschild, 1897** (Plate 11 figs 5-8)
"*Daphnis dohertyi* sp. nov." - Rothschild 1897: 307. Type locality: "Kapaur, Dutch S. W. New Guinea, ..." [= Indonesia: West Papua, environs of Fakfak].
= "*Deilephila dohertyi callusia* subsp. nov." - Rothschild, Jordan 1916: 120. Type locality: "Solomon Islands: Choiseul (type) ..." [= Solomon Islands: Choiseul Island].

Material examined: 1♂ (Plate 11 figs 5-6), 1♂ (Plate 11 figs 7-8) Indonesia, Papua, Genyem env., 02°38'S, 140°10'E, 500 m, 30.XII.2008-02.I.2009; 4♂, 2♀, same locality and date; 1♂, same locality, 25.I-02.II.2009; 1♂, same locality, 31.I-02.II.2009; 1♂ Indonesia, Papua, Taritatu riv., SE from Dabra, 03°15'S, 138°34'E, 60 m, 05-16.I.2009.
Note: Currently, it is divided into two subspecies, of which the nominotypical one inhabits the Island of New Guinea and the nearest islands to the northeast. A rather common species. It can be separated from all other congeners of New Guinea by the higher contrast wing pattern.
Distribution: It occurs in New Guinea and surrounding islands off to the east up to Solomon Islands.

***Daphnis protrudens* R. Felder, 1875** (Plate 11 figs 9-10)
"*D.*[*aphnis*] *protrudens* R. Felder." - R. Felder 1875[7]: 3, Tab. 76, Fig. 7. Type locality: "Molucc (Type) Lorquin." (Rothschild, 1919: 242) [= Indonesia: Maluku Islands].

Material examined: 1♂ (Plate 11 figs 9-10) Indonesia, Papua, Genyem env., 02°38'S, 140°10'E, 500 m, 30.XII.2008-02.I.2009.
Note: At present, this species is divided into two subspecies, of which the nominotypical one populates New Guinea.
Distribution: It occurs from the island of Sulawesi in the west to the Solomon Islands in the east. Beside that, it is known from Queensland, Australia as well.

***Acosmeryx* Boisduval, 1875 ["1874"]**
"*Acosmeryx*. Boisd." - Boisduval 1975 ["1874"]: 214. Type species: *Sphinx anceus* Stoll, 1781, by subsequent designation by Kirby (1892: 648).

Note: The species of the genus cannot be confused with any other genera of New Guinea because of the shape and coloration of the forewing, which is brown or grey-brown with a well-visible rose or violet sheen. "There is no unified point of view on

7 – The exact dates of the publication of the "Novara Reise" were published by Higgins (1963). According to this work, the date of publication of the fourth part ("Heft 4") of the Lepidoptera section is January 7th, 1875.




the amount of species, and the number of species included into it varies from 15 to 20" (Zolotuhin, Ryabov 2012: 108). Only two species of the genus are known to occur in New Guinea. Both of them are in our collection.
Distribution: The genus occurs in the southern and eastern Palaearctic, in the Oriental and Australian regions.

***Acosmeryx anceus* (Stoll, 1781)** (Plate 11 figs 11-20)
"*Anceus*. ...*Spninx* ..." - Stoll 1781: 124, pl. 355, fig. A. Type locality: "... l'Isle Moluque d'Amboine ..." [= Indonesia: Maluku Islands, Ambon Island].
= "*Zonilia mixtura*." - Walker 1864: 34. Type locality: "Aru." [= Indonesia: Maluku Islands, Aru Islands].
= "*Enyo cinnamomea* HS." - Herrich-Schäffer 1869: 3, Tab. [98], Fig. 558. Type locality: "Aus Nordaustralien." [= North Australia].
= "*A.*[*cosmeryx*] *Daulis*. Boisd." Boisduval 1875: 218. Type locality: "Décrit sur un individu unique et don't nous ignorons la patrie" [= unknown].
= "*A.*[*cosmeryx*] *anceus subdentata* subsp. nov." - Rothschild, Jordan 1903: 528. Type locality: "North India to Sambawa." [= North India: Megahalaya, Sikkim; Butan; Indonesia: Sumatra, Java].
= "*Acosmeryx anceus bismarckiana* ssp. n." - Brechlin, Kitching 2007: 7, Abb. 7, 8, 13. Type locality: "Papua New Guinea, W-New Britain prov., Talasea peninsula; Bulumuv (near Bulu Murli), rainforest, Lake Dakataua, 250 m; ...". [= Papua New Guinea: West Britain Province, Talasea Peninsula].

Material examined: 12♂, 2♀ Indonesia, Papua, Sentani env., Cyclops Mts., 02°32'S, 140°28'E, 300 m, 26-29.XII.2008; 1♂ (Plate 11 figs 15-16), same locality, 04-06.II.2009; 8♂ Indonesia, Papua, Taritatu riv., SE from Dabra, 03˚15'S, 138˚34'E, 60 m, 05-16.I.2009; 1♀ (Plate 11 figs 19-20), same locality, 05-06.I.2009; 1♂, 1♀ (Plate 11 figs 17-18) Indonesia, Papua, Genyem env., 02˚38'S, 140˚10'E, 500 m, 30.XII.2008-02.I.2009; 6♂, same locality, 27-30.I.2009; 2♂ (Plate 11 figs 11-14), same locality, 25.I-02.II.2009; 1♂, same locality and date.
Note: The smallest species of the genus. The forewing with strong rose-purple sheen. Currently, it is divided into three subspecies, of which the nominotypical one inhabits New Guinea and surrounding islands.
Distribution: Widely distributed in the Oriental and Australian regions from North India in the northwest to Queensland, Australia in the southeast.

***Acosmeryx miskinoides* Vaglia, Haxaire, 2007** (Plate 12 figs 1-6)
"*Acosmeryx miskinoides* sp. n." - Vaglia, Haxaire 2007: 7. Type locality: "Nouvelle-Guinée, Morobe, Vallée de Wau en direction de Bulolo, ..." [= Papua New Guinea: Morobe Province, Wau].
Acosmeryx miskini auctorum, nec *Acosmeryx miskini* Murray, 1873.

Material examined: 1♂ Indonesia, Papua, Genyem env., 02˚38'S, 140˚10'E, 500 m, 31.XII.2008-02.I.2009; 4♂, same locality, 27-30.I.2009; 1♂, same locality, 31.I-02.II.2009; 2♂ (Plate 12 figs 1-4), 1♀ (Plate 12 figs 5-6) Indonesia, Papua, Taritatu riv., SE from Dabra, 03˚15'S, 138˚34'E, 60 m, 05-16.I.2009; 11♂, 2♀, same locality and date; 4♂ Indonesia, Papua, Sentani env., Cyclops Mts., 02°32'S, 140°28'E, 300 m, 04-06.II.2009.
Note: This species is very similar to *A. miskini* (Murray, 1873) from Queensland, Australia. They differ from each other in the minute details in the male genitalia. Beside that, they have a difference of 4% in the COI gene (Vaglia, Haxaire 2007). A rather common species.
Distribution: It is known in New Guinea and surrounding islands.

***Eupanacra* Cadiou, Holloway, 1989**
Eupanacra Cadiou, Holloway 1989: 139. Type species: *Panacra dohertyi* Rothschild, 1894, by original designation.

Note: Species of the genus are small or medium in size with an elongated forewing. A rather large genus including 23-25 species. Three species are known to occur in New Guinea, of which we have on hands only one species.
Distribution: Restricted to Oriental and Australian regions from North India in the northwest to Solomon Islands and Queensland, Australia in the southeast.

***Eupanacra micholitzi* (Rothschild, Jordan, 1893)** (Plate 12 figs 13-14)
"*Panacra Micholitzi*, sp. n." - Rothschild, Jordan 1893: 456. Type locality: "Simbang, near Finschhafen, German New Guinea ..." [= Papua New Guinea: Morobe Province, Simbang].
= "*Panacra hollandiae* sp. nov." - Clark 1931: 80. Type locality: "Dutch New Guinea." [= Indonesia: West Papua or Papua Province].




Material examined: 1♂ (Plate 12 figs 13-14) Indonesia, Papua, Taritatu riv., SE from Dabra, 03˚15'S, 138˚34'E, 60 m, 05-16.I.2009.
Note: This species cannot be confused with any other Hawk moths of New Guinea because of the colour pattern on the wings. It is a rather rare species.
Distribution: It inhabits New Guinea and islands off to the east (the D'Entrecasteaux Islands).

***Eurypteryx* R. Felder, 1875**

"*Eurypteryx* ... Felder." - R. Felder 1875: 4, pl. 76, fig. 1. Type species: *Eurypteryx molucca* R. Felder, 1875, by monotypy.
= "*Indiana*, n. g." - Tutt 1903: 101 [nec *Indiana* Matthew, 1902 (Crustacea)]. Type species: *Darapsa bhada* Moore, 1865, by original designation.

Note: The wings of the species of the genus are brown with an indistinct pattern. Besides that, the males have a well-developed anal tuft. Currently, eight species are included into the genus, of which two are known to be from New Guinea. We have on hand a single species only.
Distribution: Restricted to Oriental and Australian regions from Nepal in the northwest to the Louisiade Archipelago in the southeast.

***Eurypteryx falcata* Gehlen, 1922** (Plate 12 figs 7-8)

"*Eurypteryx falcata* sp. n." - Gehlen 1922: 360, Abb. 1. Type locality: "Deutsch-Neue-Guinea, Kaiser-Wilhelm-Land ..." [= Northern part of Papua New Guinea].

Material examined: 1♂ (Plate 12 figs 7-8) Indonesia, Papua, Genyem env., 02˚38'S, 140˚10'E, 500 m, 25.I-02.II.2009.
Note: This species is easily differentiated from the congener from New Guinea (*E. molucca* R. Felder, 1875) by the falciform apex and colour pattern of the forewing.
Distribution: This species seems to be endemic to the island of New Guinea.

***Macroglossum* Scopoli, 1777**

"*Macroglossum*. Scop." - Scopoli 1777: 414. Type species: *Sphinx stellatarum* Linnaeus, 1758, by monotypy.
= "*Psithyros* ..." Hübner 1819 ["1816"]: 132. Type species: *Sphinx stellatarum* Linnaeus, 1758, by subsequent designation by Rothschild, Jordan (1903: 616).
= "*Rhamphoschisma*. Mihi." - Wallengren 1858: 139. Type species: *Rhamphoschisma fasciatum* Wallengren, 1858 [= *Psithyros trochilus* Hübner, 1823 ["1806"]], fixed by original designation.
= "*Rhopalopsyche*, n. gen." - Boisduval 1875b: 239. Type species: *Rhopalopsyche nycteris* Kollar, 1844, fixed by original designation.

Note: Many authors (Fletcher, Nye 1982; Danner et al. 1998; Zolotuhin, Ryabov 2012) use the name "*Bombylia* Hübner, 1822", as a synonym of the genus *Macroglossum* Scopoli, 1777 which, in our opinion, is an unavailable name and should be completely excluded from Zoological Nomenclature. The generic name "*Bombylia*" appeared for the first time in Hübner's "Tentamen" (Hübner 1806). The latter was subsequently rejected for nomenclatural purposes by the International Commission on Zoological Nomenclature (ICZN 1926, 1954) as an unpublished work. Further, the name "*Bombylia*" is given in Hübner (1822) in the combination "*Bombylia vulgaris*" on pages 10, 11, 13 and as "*Bombylia aequivoca*" on page 12. These two species-group names are unavailable because they where not accompanied by either a description or a definition (nomen nudum) (Article 12.1. of the International Code of Zoological Nomenclature) (ICZN 1999) Therefore *Bombylia* Hübner, 1822 is an unavailable genus-group name on the basis of Article 67.1 of the International Code of Zoological Nomenclature (ICZN 1999). In accordance with the Article 11.5.2. of the International Code of Zoological Nomenclature (ICZN 1999) "the status of a previously unavailable name is not changed by its mere citation (that is, without adoption for a taxon) even if accompanied by a reference to the work in which the name was published but was not made available". Kirby in 1892 cited the name *Bombylia* as a synonym of the genus *Macroglossa* [sic!], but did not use it as the valid name ("*Bombylia*, Hübn. Tentamen, p. 1 (1810?)") (Kirby 1892: 629). Finally, Rothschild and Jordan also did not make this taxon available, quoting it in synonymy, but with an incorrect authorship by Kirby (Rothschild, Jordan 1903: 616).
A large genus which contains more than 110 described species. All of them are day-flying moths. At present, 23 species are known from New Guinea, of which we have on hands a single species only.
Distribution: This genus is distributed everywhere in the Old World, but with the greatest diversity in South-East Asia.




***Macroglossum nubilum* Rothschild, Jordan, 1903**
(Plate 12 figs 15-16)

"*Macroglossum nubilum* spec. nov." - Rothschild, Jordan 1903: 652, pl. 4, fig 17; pl. 50, fig. 46; pl. 56, fig. 26. Type locality: "... Milne Bay, Brit. N. Guinea, ..." [= Papua New Guinea: Milne Bay Province, Milne Bay].

Material examined: 1♂ (Plate 12 figs 15-16) Indonesia, Papua, Taritatu riv., SE from Dabra, 03˚15'S, 138˚34'E, 60 m, 05-16.I.2009.

Note: This species can be easily distinguished from all congeners from New Guinea by the colour pattern of the hindwing and abdomen dorsally.

Distribution: It inhabits New Guinea and islands off to the east (Louisiade Archipelago). It is known in Queensland, Australia as well.

***Hippotion* Hübner, 1819 ["1816"]**

"*Hippotion* ..." - Hübner 1819 ["1816"]: 135. Type species: *Sphinx celerio* Linnaeus, 1758, by subsequent designation by Kirby (1892: 747).

= "*Isoples* ..." - Hübner 1819 ["1816"]: 135. Type species: *Sphinx thyelia* Linnaeus, 1758, by subsequent designation by Kirby (1897: 24).

= "*Panacra*." - Walker, 1856 77 (key), 154. Type species: *Panacra lignaria* Walker, 1856 [= *Sphinx vigil* Guérin-Méneville, 1843; = *Sphinx velox* Fabricius, 1793], by subsequent designation (as *Sphinx vigil* Guérin-Méneville, 1843) by Moore (1882 [8]: 25).

Note: Species of the genus are ochre, brown or grey-brown in coloration, sometimes with bright pink or red hindwing. Usually the forewing has a longitudinal pattern. The genus includes up to 40 species, some of them are know as an extremely active vagrant. Seven species are known to occur in New Guinea. We have only three in our collection.

Distribution: This genus inhabits the Afrotropical, Oriental and Australian regions. The distribution of some species extends to the southern parts of the Palaearctic.

***Hippotion velox* (Fabricius, 1793)** (Plate 12 figs 9-12)

"[*Sphinx*] *velox*." - Fabricius 1793: 378. Type locality: "... in India orientali ..." [= East India].

= "*Panacra lignaria*." - Walker 1856: 156. Type locality: "... Ceylon. ... Cape York, Australia." [= Sri Lanka; Australia: Queensland, Cape York Peninsula].

= "*C.*[*oerocampa*] *Yorkii*. Boisd." - Boisduval 1875a: 248. Type locality: "... du cap York ..." [= Australia: Queensland, Cape York Peninsula].

= "*Panacra rosea* sp. nov." - Rothschild 1894: 79. Type locality: "Lifu, Loyalty Islands." [= France (New Caledonia): Loyalty Islands, Lifou Island].

= "*Panacra lifuensis* sp. nov." - Rothschild 1894: 79. Type locality: "Lifu, Loyalty Islands." [= France (New Caledonia): Loyalty Islands, Lifou Island].

= "*Panacra griseola* sp. nov." - Rothschild 1894: 80. Type locality: "Lifu, Loyalty Islands." [= France (New Caledonia): Loyalty Islands, Lifou Island].

= "*Panacra pseudovigil* sp. nov." - Rothschild 1894: 80. Type locality: "?" [= unknown].

= "*Hippotion beddoesii* sp. nov." - Clark 1922: 19. Type species: "Suva, Fiji." [= Republic of Fiji: Viti Levu Island, Suva].

= "*Hippotion noel* sp. nov." - Clark 1923: 68. Type locality: "Christmas Island." [= Australia: Christmas Island].

Material examined: 2♂, 1♀ (Plate 12 figs 11-12) Indonesia, Papua, Genyem env., 02˚38'S, 140˚10'E, 500 m, 30.XII.2008-02.I.2009; 1♂ (Plate 12 figs 9-10), same locality, 25.I-02.II.2009; 1♂, same locality, 31.I-02.II.2009; 1♂ Indonesia, Papua, Taritatu riv., SE from Dabra, 03˚15'S, 138˚34'E, 60 m, 05-16.I.2009.

Note: A very common species, which can be easily differentiated from all congeners from New Guinea by the colour pattern of the forewing.

Distribution: It occurs from India in the west to the Fiji Islands in the east.

***Hippotion boerhaviae* (Fabricius, 1775)** (Plate 12 figs 17-22)

"[*Sphinx*] *Boerbaviae*." - Fabricius 1775: 542. Type locality: "... in Indiae ..." [= India].

Material examined: 1♂ (Plate 12 figs 17-18) Indonesia, Papua, Sentani env., Cyclops Mts., 02°32'S, 140°28'E, 300 m, 26-29.XII.2008; 2♂, same locality and date; 1♂, same locality, 28.XII.2008; 2♂, 1♀, same locality, 04-06.II.2009; 1♂ (Plate 12 figs 19-20), 1♀ (Plate 12 figs 21-22), same locality, 05.II.2009; 1♂ Indonesia, Papua, Genyem env., 02˚38'S, 140˚10'E, 500 m, 25.I-02.II.2009.

Note: There is still no consensus on the systematic position of this taxon because many researches believe that it is conspecific with *H. rosetta* (Swinhoe, 1892). We accept it as a distinct species.

Distribution: This species is widespread from India in the west to the Fiji Islands in the east.

8 – The dates of publication of the "Lepidoptera of Ceylon" by Moore were discussed by Griffin (1939).

***Hippotion brennus* (Stoll, 1782)** (Plate 12 figs 23-30)

"*Brennus*. ... *Sphinx* ..." - Stoll in Cramer 1782: 233, pl. 398, fig. B. Type locality: "... l'Isle Molucque d'Amboine, ..." [= Indonesia: Maluku Islands, Ambon Island].

= "*Choerocampa Johanna*." - Kirby 1877: 241. Type locality: "Brisbane." [= Australia: Queensland, Brisbane].

= "*Hippotion rubribrenna*, sp. n." - Joicey, Kaye 1917: 307. Type locality: "Dutch New Guinea, Central Arfak Mts., 3500 ft., ..." [= Indonesia: West Papua, Arfak Mts.].

= "*Hippotion brennus funebris* m. subspec. nova." - Gehlen 1926: 175. Type locality: "Malu, am Kaiserin-Augusta Fluß (Sepik) in Neu-Guinea, ca. 100 km von der Küste entfernt." [= Papua New Guinea: ca 100 km upstream of the Sepik River mouth].

= "*Hippotion novaebrittaniae* sp. nov." - Clark 1932: 41. Type locality: "New Britain." [= Papua New Guinea: New Britain Island].

= "*Hippotion brennus viettei* n. subsp." - Darge 1975: 180. Type locality: "Lorengau, Manu Island, ..." [= Republic of Fiji: Mamanuca Islands, Manu Island].

Material examined: 1♂ (Plate 12 figs 25-26) Indonesia, Papua, Sentani env., Cyclops Mts., 02°32'S, 140°28'E, 300 m, 26-29.XII.2008; 1♂ (Plate 12 figs 23-24), same locality, 04-06.II.2009; 1♂ (Plate 12 figs 27-28) Indonesia, Papua, Genyem env., 02°38'S, 140°10'E, 500 m, 30.XII.2008-02.I.2009; 1♂, same locality, 25.I-02.II.2009; 1♂ (Plate 12 figs 29-30) Indonesia, Papua, Taritatu riv., SE from Dabra, 03°15'S, 138°34'E, 60 m, 05-16.I.2009; 4♂, same locality and date.

Note: This very common and rather variable species can be distinguished from all congeners from New Guinea by the coloration of the hindwing and the coloration of the abdomen.

Distribution: It occurs in New Guinea and surrounding islands from north Maluku Islands in the west to the Solomon Islands in the east, known to occur in Queensland, Australia as well.

***Theretra* Hübner, 1819 ["1816"]**

"*Theretra* ..." Hübner 1819 ["1816"]: 135. Type species: *Sphinx equestris* Fabricius, 1793 [= *Sphinx nessus* Drury, 1773], by subsequent designation (as *Sphinx nessus* Drury, 1773) by Kirby (1892: 659).

= "*Oreus* ..." - Hübner 1819 ["1816"]: 136. Type species: *Sphinx gnoma* Fabricius, 1775, by subsequent designation by Rothschild, Jordan 1903: 387.

= "*Gnathostypsis*. Mihi." - Wallengren 1858: 137. Type species: *Gnathostypsis ostracina* Wallengren, 1858 [= *Sphinx capensis* Linnaeus, 1764], by original designation.

= "*Hathia*." - Moore 1882 [9]: 19. Type species: *Sphinx clotho* Drury, 1773, by subsequent designation by Kirby (1883: 183).

= "*Florina*, n. g.," - Tutt 1903a: 76. Type species: *Choerocampa japonica* Boisduval, 1867, by original designation.

= "*Lilina*, n. g." - Tutt 1903b: 101. Type species: *Sphinx pinastrina* Butler, 1876 [= *Choerocampa balsaminae* Walker, 1856], by original designation.

Note: Superficially, the species of this genus are very similar to the previous one, but they can be distinguished by the structure of the labial palpus. At present, the genus contains slightly more than 60 species. Only 13 species of the genus are known from New Guinea, of which eight are present in our collection.

Distribution: Restricted to tropics and subtropics of the Old World. It is known from the southern part of the Palaearctic Region as well. Some species are active migrants and can be found far away from their native area.

***Theretra nessus* (Drury, 1773)** (Plate 13 figs 1-6)

"*Nessus*. ...*Sph*.[*inx*]" - Drury 1773: [91], pl. 27, fig. 1. Type locality: "... Madras." (Drury, 1773: 46) [= India: Tamil Nadu State, Chennai].

= "[*Sphinx*] *equestris*." - Fabricius 1793: 365. Type locality: "... in India orientali ..." [= East India].

= "*Chaerocampa* [sic!] *Nessus* Cr. v. *rubicundus*" - Schaufuss 1870: 18. Type locality: "[Java]" [Indonesia: Java Island].

= "*Theretra nessus albata* ssp. n." - Fukuda 2003: 118, figs 1-4, 11. Type locality: "Fiji, Viti Levu Is., Nuku, ..." [= Republic of Fiji: Viti Levu Island].

Material examined: 1♂, 7♀ Indonesia, Papua, Sentani env., Cyclops Mts., 02°32'S, 140°28'E, 300 m, 26-29.XII.2008; 1♂, 4♀, same locality, 04-06.II.2009; 1♂ (Plate 13 figs 1-2) Indonesia, Papua, Taritatu riv., SE from Dabra, 03°15'S, 138°34'E, 60 m, 05-16.I.2009; 4♂, 1♀, same locality and date; 4♂, 1♀ (Plate 13 figs 5-6) Indonesia, Papua, Genyem env., 02°38'S, 140°10'E, 500 m, 25.I-02.

9 – Pages 1-32 and plates 72-89 of the second volume of Moore's "Lepidoptera of Ceylon" were issued 31 August 1882. Dates of publication of this work were discussed by Griffin (1939).




II.2009; 1♀, same locality and date; 1♀, same locality, 30.XII.2008-02.I.2009; 1♀ (Plate 13 figs 3-4), same locality, 25.I.2009; 1♀, same locality and date; 4♀, same locality, 27-30.I.2009.
Note: This species can be easily distinguished from other congeners from New Guinea by the presence of two golden stripes on the abdomen. It is a most common species as in New Guinea, and within the area of its distribution. Currently this species is divided into two subspecies, which we think is hardly justified.
Distribution: This species is widespread in the Indo-Australia from India in the west and Japan in the north to Fiji in the east and Australia in the south.

***Theretra insularis* (Swinhoe, 1892)** (Plate 13 figs 7-10)
"*Choerocampa insularis*. n. sp." - Swinhoe 1892: 18. Type locality: "Ceram ... Ké ..." [= Indonesia: Maluku, Seram Island, Kei Islands].
= "*Theretra rhesus valens*, subsp. n." - Jordan 1926: 108. Type locality: "... Talasea, New Britain ..." [= Papua New Guinea: West New Britain Province, Talasea District].
= "*Theretra rhesus mollis*, subsp. n." - Jordan 1926: 108. Type locality: "... St. Mathias [sic!] and Squally Islands ..." [= Papua New Guinea: New Ireland Province, St. Matthias Islands].
= "*Theretra rhesus lenis*, subsp. n." - Jordan 1926: 108. Type locality: "Solomon Islands, ...".
= "*Theretra insularis ambrymensis* subsp. n." - Lachlan 2004: 169, figs 1-3, 7. Type locality: "Vanuatu: Olal Catholic Mission area, north Ambrym Is., ..." [= Vanuatu: Ambrym Island].

Material examined: 1♂ (Plate 13 figs 9-10) Indonesia, Papua, Sentani env., Cyclops Mts., 02°32'S, 140°28'E, 300 m, 26-29.XII.2008; 1♂, same locality and date; 1♂ (Plate 13 figs 7-8), same locality, 04-06.II.2009; 2♂ Indonesia, Papua, Genyem env., 02˚38'S, 140˚10'E, 500 m, 30.XII.2008-02.I.2009; 7♂, 1♀, same locality, 25.I-02.II.2009; 1♀, same locality, 27-30.I.2009.
Note: This species has been revised by Vaglia and coauthors (Vaglia et al., 2010). They have shown that this species is divided into five subspecies, of which the nominotypical one populates the island of New Guinea. A rather common species.
Distribution: It occurs in New Guinea and surrounding islands from Seram in the west to Vanuatu in the east.

***Theretra radiosa* Rothschild, Jordan, 1916** (Plate 13 figs 11-14)
"*Theretra radiosa* spec. nov." - Rothschild, Jordan 1916: 263. Type locality: "... Goodenough Island, 2500-4000 ft., ... type; ..." [= Papua New Guinea: Milne Bay Province, D'Entrecasteraux Islands, Goodenough Island].

Material examined: 1♂ (Plate 13 figs 13-14) Indonesia, Papua, Genyem env., 02˚38'S, 140˚10'E, 500 m, 31.XII.2008-02.I.2009; 1♂ (Plate 13 figs 11-12), same locality, 27-30.I.2009.
Note: Superficially this species is similar to the previous one, but differs from it in some details of the coloration of the wings and abdomen.
Distribution: This species occurs in New Guinea and surrounding islands from the Raja Ampat Islands in the west to the Louisiade Archipelago in the east. It is known in Queensland, Australia as well.

***Theretra silhetensis* (Walker, 1856)** (Plate 13 figs 15-16)
"*Chaerocampa* [sic!] *Silhetensis*." - Walker 1856: 143. Type locality: "Ceylon. ... North India. ... Silhet. ... Nepaul. ... North China. ..." [= Sri Lanka; North India; Bangladesh: Silhet; Nepal].
= "*Chaerocampa* [sic!] *bisecta*, Horsfield Sp." - Moore 1858 ["1857"]: 278. Type locality: "Java. ... N. India. ..." [= Indonesia: Java; North India].
= "*Chaerocampa* [sic!] *intersecta*, n. sp." - Butler 1875c: 623. Type locality: "Queensland ..." [= Australia: Queensland].

Material examined: 1♂ (Plate 13 figs 15-16) Indonesia, Papua, Sentani env., Cyclops Mts., 02°32'S, 140°28'E, 300 m, 26-29.XII.2008.
Note: Superficially this species is similar to two previous species, but differs from them by the presence of the bright silvery-white line on the abdomen dorsally and in some details of the coloration of the wings. Besides that, it is the smallest species of the genus. Currently this species is divided into two subspecies, of which ssp. *intersecta* Butler, 1875 is known to be from New Guinea.
Distribution: It is widespread from the North India and Nepal in the west to the Vanuatu Archipelago in the east.

***Theretra celata* (Butler, 1877)** (Plate 13 figs 17-18)
"*Chaerocampa* [sic!] *celata*, n. sp." - Butler 1877b: 472. Type locality: "Cape York." [= Australia:




Queensland, Cape York Peninsula].
= "*C.*[*haerocampa*] [sic!] *Cloacina*, n. sp." - Miskin 1891: 16. Type locality: "... Brisbane ..." [= Australia: Queensland, Brisbane].
= "*Choerocampa luteotincta*, nov. sp." - Lucas 1891: 894. Type locality: "Brisbane." [=Australia: Queensland, Brisbane].
= "*Theretra babarensis* spec. nov." - Eitschberger 2005: 264, Farbtaf. 18, Abb. 1, 2; Taf. 1, Abb. 1-6; Taf. 2, Abb. 1-6; Taf. 3, Abb. 1-6; Taf. 4, Abb. 3-6; Taf. 5, Abb. 1-5; Taf. 6, Abb. 1-3; Taf. 7, Abb. 2-4; Taf. 8, Abb. 2-4. Type locality: "Indonesia, Moluccas, 7-10 m, Babar Archipel, Wetan [sic!] Island, ..." [= Indonesia: Maluku Islands, Babar Islands, Wetar Island].

Material examined: 1♂ (Plate 13 figs 17-18) Indonesia, Papua, Genyem env., 02˚38'S, 140˚10'E, 500 m, 25.I-02.II.2009.
Note: This species has been revised by Vaglia and coauthors (Vaglia et al. 2010). They divided this species into two subspecies, of which the nominotypical one inhabits the Island of Papua New Guinea.
Distribution: This species occurs in New Guinea and surrounding islands from Buru and Seram in the west to Solomon Islands in the east. It is found in northern Queensland, Australia as well.

***Theretra indistincta* (Butler, 1877)** (Plate 14 figs 1-4)
"*Choerocampa indistincta*, n. sp." - Butler 1877a: 460. Type locality: "Rockhampton, Queensland." [= Australia: Queensland, Rockhampton].
= "*C.*[*haerocampa*] [sic!] *Cleopatra*, n. sp." - Miskin 1891: 15. Type locality: "Brisbane." [= Australia: Queensland, Brisbane].
= "*Choerocampa curvilinea*, nov. sp.," - Lucas 1891: 834. Type locality: "Brisbane." [= Australia: Queensland, Brisbane].
= "*Theretra clotho manuselensis*, subsp. nov." - Joicey, Talbot 1921: 108. Type locality: "... Mount Manusela, Central Ceram, 6000 ft., ..." [= Indonesia: Maluku Islands, Seram Island].
= "*Theretra clotho papuensis*, subsp. nov." - Joicey, Talbot 1921: 108. Type locality: "Wandammen Mts., 3-4000 ft. D. N. Guinea ..." [= Indonesia: West Papua Province, Wandammen Peninsula, Wandammen Mts.], designated by lectotype fixed by Lachlan (2009: 85).
= "*Theretra indistincta bismarcki*, subsp. n." - Jordan 1926: 208. Type locality: "A series from the Bismarck Archipelago. Type from New Ireland." [= Papua New Guinea: New Ireland Province, New Ireland Island].

Material examined: 1♂ (Plate 14 figs 1-2) Indonesia, Papua, Sentani env., Cyclops Mts., 02°32'S, 140°28'E, 300 m, 04-06.II.2009; 1♂, same locality and date; 1♀ (Plate 14 figs 3-4) Indonesia, Papua, Genyem env., 02˚38'S, 140˚10'E, 500 m, 25.I-02.II.2009.
Note: Habitually this species is similar to the previous one, but can be distinguished from it by the presence of pinkish scales on the antenna, upper side of the wings and abdomen. Currently it is divided into four subspecies, of which ssp. *papuensis* Joicey, Talbot, 1921 populates the island of New Guinea.
Distribution: This species populates the islands from Sulawesi and Maluku Islands in the east to Bismarck and the Louisiade Archipelago in the east and the province of Queensland, Australia in the south.

***Theretra tabubilensis* Lachlan, 2009** (Plate 14 figs 5-8)
"*Theretra tabubilensis* n. sp." - Lachlan 2009: 85, figs 10, 11, 20. Type locality: "Papua New Guinea. Tabubil, Western Province, ..." [= Papua New Guinea: Western Province, Tabubil].

Material examined: 2♂ (Plate 14 figs 5-8) Indonesia, Papua, Genyem env., 02˚38'S, 140˚10'E, 500 m, 25.I-02.II.2009.
Note: Superficially, this species resembles *Th. indistincta* (Butler, 1877), but it is slightly smaller and without pinkish scales.
Distribution: This species seems to be endemic to New Guinea and nearby islands.

***Theretra latreillii* (W.S. MacLeay, 1826 ["1827"])** (Plate 14 figs 9-12)
"*Sphinx Latreillii*, (n. s.)" - W.S. Macleay 1826 ["1827"] [10]. 464. Type locality: not stated [= Australia?].
= "*Chaerocampa* [sic!] *comminuens*." - Walker 1864: 31. Type locality: "Moreton Bay." [= Australia: Queensland, Moreton Bay].
= "*Chaerocampa* [sic!] *deserta*, n. sp." - Butler 1876: 638. Type locality: "Hunter River, Australia ..." [= Australia: New South Wales].
= "*Choerocampa Walduckii*, n. sp." - Butler 1877c: 398, pl. 9, fig. 2. Type locality: "Australia ..." [= Australia: Queensland].
= "*Choerocampa amara*, n. sp." - Swinhoe 1892:

10 – According to Sherborn, "this work was issued 10 Ap. 1826" (Sherborn 1922: lxxiii).




21, pl. 1, fig. 9. Type locality: "Mysol ... Amboyna ..." [= Indonesia: West Papua, Raja Ampat Islands, Misool; Maluku, Ambon Island].
= "*Theretra prattorum* sp. nov." - Clark 1924: 19. Type locality: "Kako Tagalago, central Buru, 2700 ft. May, 1922, ..." [= Indonesia: Maluku Islands, Buru Island].

Material examined: 1♂ (Plate 14 figs 9-10) Indonesia, Papua, Sentani env., Cyclops Mts., 02°32'S, 140°28'E, 300 m, 26-29.XII.2008; 4♂, same locality and date; 1♀ (Plate 14 figs 11-12) Indonesia, Papua, Taritatu riv., SE from Dabra, 03˚15'S, 138˚34'E, 60 m, 05-16.I.2009; 1♂ Indonesia, Papua, Genyem env., 02˚38'S, 140˚10'E, 500 m, 25.I-02.II.2009.
Note: This species differs from all congeners from New Guinea by the absence of a black spot on the abdomen laterally at the base. Presently, it is divided into three subspecies, of which the nominotypical one inhabits New Guinea.
Distribution: This species is widespread in the Indo-Australia from India in the west and Southeast China and Taiwan in the north to the Solomon Islands in the east and Australia in the south.

***Theretra tryoni* (Miskin, 1891)** (Plate 14 figs 13-18)
"*C.*[*haerocampa*] [sic!] *Tryoni*, n. sp." - Miskin 1891: 17. Type locality: "Brisbane." [= Australia: Queensland, Brisbane].

Material examined: 2♂ (Plate 14 figs 13-16) Indonesia, Papua, Sentani env., Cyclops Mts., 02°32'S, 140°28'E, 300 m, 26-29.XII.2008; 2♂, 4♀, same locality and date; 1♀ (Plate 14 figs 17-18) Indonesia, Papua, Taritatu riv., SE from Dabra, 03˚15'S, 138˚34'E, 60 m, 05-16.I.2009; 1♀, same locality and date.
Note: Superficially, this species is somewhat similar to the previous one, but differs from it because of the presence of a black spot on the abdomen laterally at the base. It is a rather common species.
Distribution: From Sulawesi in the west to Fiji in the east and Queensland, Australia in the south.

Cechenena Rothschild, Jordan, 1903
"*Cechenena* gen. nov." - Rothschild, Jordan 1903: 674 (key), 799. Type species: *Philampelus helops* Walker, 1856, by original designation.
Note: This genus is closely related to the two previous genera and differs from them in the structure of the labial palpus and fore and hind tarsi. More recently, this genus had included 12 species, but Zolotuhin with Ryabov separated four species into a distinct genus *Cechetra* Zolotuhin, Ryabov, 2012 with the type species of *Cechenena subangustata* Rothschild, 1920 (Zolotuhin, Ryabov 2012). Thus, at the present time the genus *Cechenena* includes only eight species.
Distribution: Restricted to Oriental and Australian regions from North India in the west to New Guinea and nearby islands in the east.

***Cechenena helops* (Walker, 1856)** (Plate 14 figs 19-24)
"*Philampelus Helops*." - Walker 1856: 180. Type locality: "Port Natal." [= South Africa: KwaZulu-Natal Province, Durban [11]].
= "*Philampelus orientalis* Felder." - R. Felder 1875: 8, pl. 77, fig. 1. Type locality: "Sikkim (Stolicka)" [= India: State Sikkim].
= "*C.*[*echenena*] *helops papuana* subsp. nov." - Rothschild, Jordan 1903: 802. Type locality: "Milne Bay, ..." [= Papua New Guinea: Milne Bay Province, Milne Bay].
= "*Cechenea* [sic!] *helops interposita*, subsp. nov." - Joicey, Talbot 1921: 108. Type locality: "Mout Mansuela, Central Ceram, 6000 ft., ..." [= Indonesia: Maluku Islands, Seram Island].
Material examined: 1♂ Indonesia, Papua, Genyem env., 02˚38'S, 140˚10'E, 500 m, 30.XII.2008-02.I.2009; 3♂, 1♀ (Plate 14 figs 23-24), same locality, 25.I.2009; 1♂ (Plate 14 figs 21-22), same locality, 25.I-02.II.2009; 1♂ (Plate 14 figs 19-20) Indonesia, Papua, Taritatu riv., SE from Dabra, 03˚15'S, 138˚34'E, 60 m, 05-16.I.2009.
Note: This species cannot be confused with any other Hawk moths of New Guinea because of the coloration of wings and body. Currently, it is divided into three subspecies, of which the subspecies ssp. *papuana* Rothschild, Jordan, 1903 populates New Guinea and Bismarck Archipelago. A very common species.
Distribution: It is widespread from the North India in the west to the Bismarck Archipelago in the east.

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11 – As stated Fletcher and Nye: "this evidently incorrect, for the species does not occur in Africa, but is widely distributed in the Oriental Region" (Fletcher, Nye 1982: 32).




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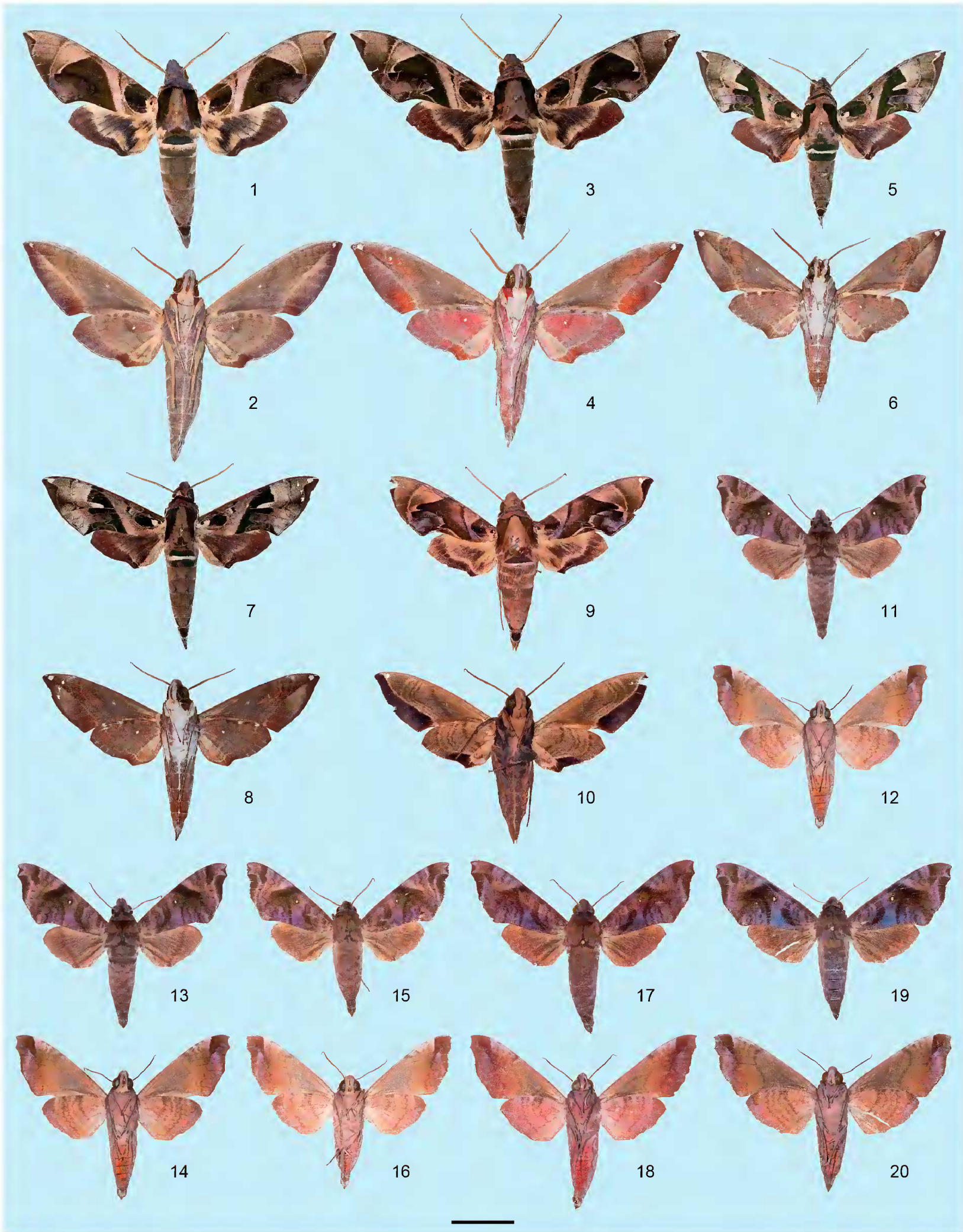
Figures 1-14. Habitus of Papuan Sphingidae. 1-2: *Acherontia lachesis* (Fabricius, 1798); 1 – ♂, Papua, Genyem env.; 2 – ditto, underside; 3-6: *Agrius convolvuli* (Linnaeus, 1758); 3 – ♂, Papua, Taritatu riv., SE from Dabra; 4 – ditto, underside; 5 – ♀, Papua, Genyem env.; 6 – ditto, underside; 7-8: *Agrius luctifera* (Walker, 1864); 7 – ♀, Papua, Sentani env., Cyclops Mts.; 8 – ditto, underside; 9-10: *Megacorma obliqua* (Walker, 1856); 9 – ♂, Papua, Genyem env.; 10 – ditto, underside; 11-14: *Meganoton rubescens* (Butler, 1875); 11 – ♂, Papua, Taritatu riv., SE from Dabra; 12 – ditto, underside; 13 – ♀, Papua, Genyem env.; 14 – ditto, underside [scale bar 20 mm].

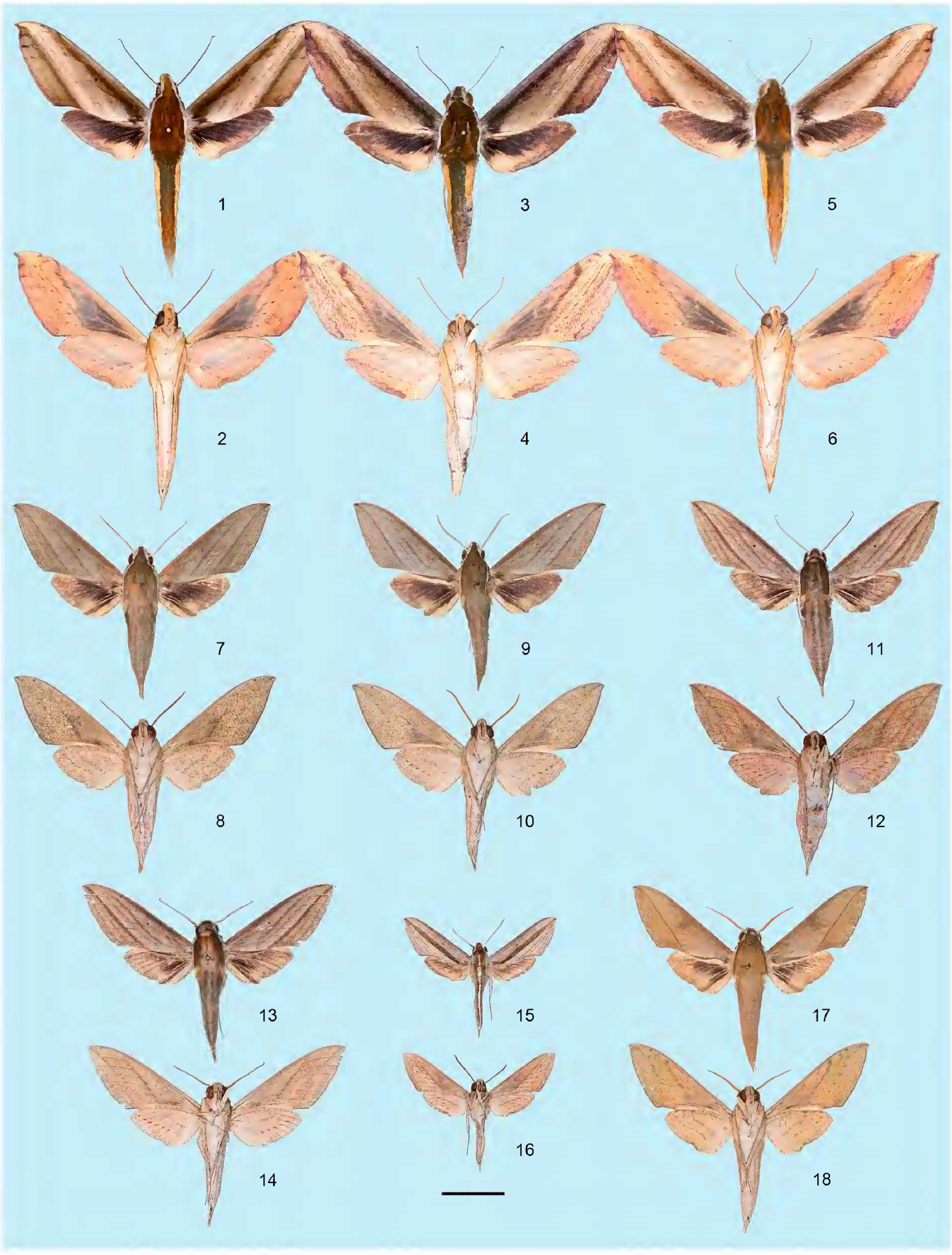
Figures 1-18. Habitus of Papuan Sphingidae. 1-6: *Psilogramma mastrigti* Eitschberger, 2001; 1 – ♂, Papua, Taritatu riv., SE from Dabra; 2 – ditto, underside; 3 – ♂, Papua, Genyem env.; 4 – ditto, underside; 5 – ♀, same locality; 6 – ditto, underside; 7-10: *Psilogramma wernerwolfi* Eitschberger, 2001; 7 – ♂, Papua, Genyem env.; 8 – ditto, underside; 9 – ♀, same locality; 10 – ditto, underside; 11-18: *Psilogramma anne* Eitschberger, 2001; 11 – ♂, Papua, Taritatu riv., SE from Dabra; 12 – ditto, underside; 13 – ♂, Papua, Genyem env.; 14 – ditto, underside; 15 – ♀, same locality; 16 – ditto, underside; 17 – ♀, same locality; 18 – ditto, underside [scale bar 20 mm].

Figures 1-20. Habitus of Papuan Sphingidae. 1-6: *Ambulyx wildei* Miskin, 1891; 1 – ♂, Papua, Genyem env.; 2 – ditto, underside; 3 – ♂, Papua, Taritatu riv., SE from Dabra; 4 – ditto, underside; 5 – ♂, same locality; 6 – ditto, underside; 7-8: *Ambulyx phalaris* (Jordan, 1919); 7 – ♀, Papua, Genyem env.; 8 – ditto, underside; 9-12: *Ambulyx dohertyi* Rothschild, 1894; 9 – ♂, Papua, Genyem env.; 10 – ditto, underside; 11 – ♂, same locality; 12 – ditto, underside; 13-16: *Gnathothlibus eras* (Boisduval, 1832); 13 – ♂, Papua, Genyem env.; 14 – ditto, underside; 15 – ♂, Papua, Taritatu riv., SE from Dabra; 16 – ditto, underside; 17-20: *Gnathothlibus heliodes* (Meyrick, 1889); 17 – ♂, Papua, Taritatu riv., SE from Dabra; 18 – ditto, underside; 19 – ♂, same locality; 20 – ditto, underside [scale bar 20 mm].

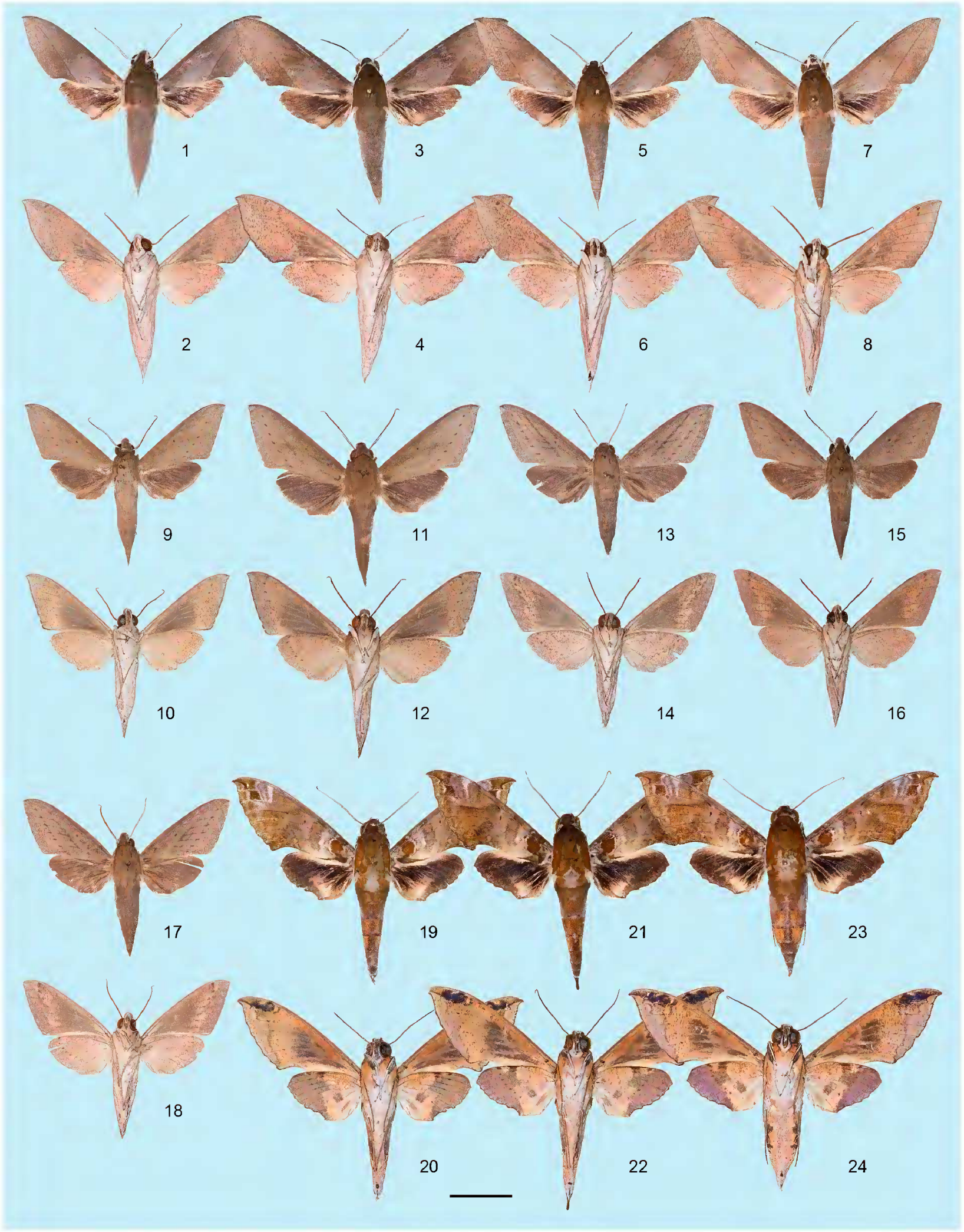


Figures 1-20. Habitus of Papuan Sphingidae. 1-2: *Daphnis moorei* (W.J. MacLeay, 1866); 1 – ♂, Papua, Sentani env., Cyclops Mts.; 2 – ditto, underside; 3-4: *Daphnis hypothous* (Cramer, 1780); 3 – ♂, Malaysia, Borneo Is., Sabah Province, Trusmadi Mt., 1600 m, 01-10.V.2008, leg. A. Gorodinski; 4 – ditto, underside; 5-8: *Daphnis dohertyi* Rothschild, 1897; 5 – ♂, Papua, Genyem env.; 6 – ditto, underside; 7 – ♂, same locality; 8 – ditto, underside; 9-10: *Daphnis protrudens* R. Felder, 1875; 9 – ♂, Papua, Genyem env.; 10 – ditto, underside; 11-20: *Acosmeryx anceus* (Stoll, 1781); 11 – ♂, Papua, Genyem env.; 12 – ditto, underside; 13 – ♂, same locality; 14 – ditto, underside; 15 – ♂, Papua, Sentani env., Cyclops Mts.; 16 – ditto, underside; 17 – ♀, Papua, Genyem env.; 18 – ditto, underside; 19 – ♀, Papua, Taritatu riv., SE from Dabra; 20 – ditto, underside [scale bar 20 mm].

Figures 1-30. Habitus of Papuan Sphingidae. 1-6: *Acosmeryx miskinoide*s Vaglia, Haxaire, 2007; 1 – ♂, Papua, Taritatu riv., SE from Dabra; 2 – ditto, underside; 3 – ♂, same locality; 4 – ditto, underside; 5 – ♀, same locality; 6 – ditto, underside; 7-8: *Eurypteryx falcata* Gehlen, 1922; 7 – ♂, Papua, Genyem env.; 8 – ditto, underside; 9-12: *Hippotion velox* (Fabricius, 1793); 9 – ♂, Papua, Genyem env.; 10 – ditto, underside; 11 – ♀, same locality; 12 – ditto, underside; 13-14: *Eupanacra micholitzi* (Rothschild, Jordan, 1893); 13 – ♂, Papua, Taritatu riv., SE from Dabra; 14 – ditto, underside; 15-16: *Macroglossum nubilum* Rothschild, Jordan, 1903; 15 – ♂, Papua, Taritatu riv., SE from Dabra; 16 – ditto, underside; 17-22: *Hippotion boerhaviae* (Fabricius, 1775); 17 – ♂, Papua, Sentani env., Cyclops Mts.; 18 – ditto, underside; 19 – ♂, same locality; 20 – ditto, underside; 21 – ♀, Papua, Sentani env., Cyclops Mts.; 22 – ditto, underside; 23-30: *Hippotion brennus* (Stoll, 1782); 23 – ♂, Papua, Sentani env., Cyclops Mts.; 24 – ditto, underside; 25 – ♂, same locality; 26 – ditto, underside; 27 – ♂, Papua, Genyem env.; 28 – ditto, underside; 29 – ♂, Papua, Taritatu riv., SE from Dabra; 30 – ditto, underside [scale bar 20 mm].



Figures 1-18. Habitus of Papuan Sphingidae. 1-6: *Theretra nessus* (Drury, 1773); 1 – ♂, Papua, Taritatu riv., SE from Dabra; 2 – ditto, underside; 3 – ♀, Papua, Genyem env.; 4 – ditto, underside; 5 – ♀, same locality; 6 – ditto, underside; 7-10: *Theretra insularis* (Swinhoe, 1892); 7 – ♂, Papua, Sentani env., Cyclops Mts.; 8 – ditto, underside; 9 – ♂, same locality; 10 – ditto, underside; 11-14: *Theretra radiosa* Rothschild, Jordan, 1916; 11 – ♂, Papua, Genyem env.; 12 – ditto, underside; 13 – ♂, same locality; 14 – ditto, underside; 15-16: *Theretra silhetensis* (Walker, 1856); 15 – ♂, Papua, Sentani env., Cyclops Mts.; 16 – ditto, underside; 17-18: *Theretra celata* (Butler, 1877); 17 – ♂, Papua, Genyem env.; 18 – ditto, underside [scale bar 20 mm].



Figures 1-24. Habitus of Papuan Sphingidae. 1-4: *Theretra indistincta* (Butler, 1877); 1 – ♂, Papua, Sentani env., Cyclops Mts.; 2 – ditto, underside; 3 – ♀, Papua, Genyem env.; 4 – ditto, underside; 5-8: *Theretra tabubilensis* Lachlan, 2009; 5 – ♂, Papua, Genyem env.; 6 – ditto, underside; 7 – ♂, same locality; 8 – ditto, underside; 9-12: *Theretra latreillii* (W.S. Macleay, 1826 [“1827“]); 9 – ♂, Papua, Sentani env., Cyclops Mts.; 10 – ditto, underside; 11 – ♀, Papua, Taritatu riv., SE from Dabra; 12 – ditto, underside; 13-18: *Theretra tryoni* (Miskin, 1891); 13 – ♂, Papua, Sentani env., Cyclops Mts.; 14 – ditto, underside; 15 – same locality; 16 – ditto, underside; 17 – ♀, Papua, Taritatu riv., SE from Dabra; 18 – ditto, underside; 19-24: *Cechenena helops* (Walker, 1856); 19 – ♂, Papua, Taritatu riv., SE from Dabra; 20 – ditto, underside; 21 – ♂, Papua, Genyem env.; 22 – ditto, underside; 23 – ♀, same locality; 24 – ditto, underside [scale bar 20 mm].